

WHAT IS CLAIMED IS:

- 5 A) 1. An ink jet printing method comprising the steps of:
 providing an ink jet printer that is responsive to digital data
 signals;
- B) loading said printer with ink jet recording element
 comprising a support having thereon an image-receiving
 layer comprising non-silicon-containing inorganic oxide
10 particles, said particles having their surfaces treated with a
 silane coupling agent having a hydrophilic, organic moiety;
- C) loading said printer with an ink jet ink composition; and
- D) printing on said image-receiving layer using said ink jet ink
 composition in response to said digital data signals.
- 15 2. The method of Claim 1 wherein said image-receiving layer
 contains said particles in an amount of from about 40 to about 95% by weight.
3. The method of Claim 1 wherein said inorganic oxide particles
20 are pseudo-boehmite, alumina, zirconia, titania, yttria or ceria.
4. The method of Claim 1 wherein said inorganic oxide particles
 are treated with said silane coupling agent in an amount of from about 0.01 to
 about 0.5 mmol/gram.
- 25 5. The method of Claim 1 wherein said silane coupling agent is N-
 (trimethoxysilyl)ethyl)benzyl-N,N,N-trimethylammonium chloride; N-
 trimethoxysilylpropyl-N,N,N-tributylammonium chloride; octadecyldimethyl(3-
 trimethoxysilylpropyl)ammonium chloride; or N-(3-triethoxysilylpropyl)-4,5-
30 dihydroimidazole.

6. The method of Claim 1 wherein said image-receiving layer contains a polymeric binder.

5 7. The method of Claim 6 wherein said polymeric binder is poly(vinyl alcohol).

8. The method of Claim 6 wherein said polymeric binder is present in an amount of from about 5 to about 30% by weight.

10 9. The method of Claim 1 wherein said image-receiving layer is present at a thickness of from about 1 μm to about 60 μm .

10. The method of Claim 1 wherein said inorganic oxide particles have a particle size of from about 5 nm to about 1,000 nm.

15 11. The method of Claim 1 wherein a base layer is present in between said support and said image-receiving layer.

20 12. The method of Claim 11 wherein said base layer comprises inorganic particles and a polymeric binder.

13. The method of Claim 12 wherein said inorganic particles are calcium carbonate, calcined clay, aluminosilicates, zeolites or barium sulfate.

25 14. The method of Claim 12 wherein said polymeric binder is a styrene/acrylic latex, styrene/butadiene latex or poly(vinyl alcohol).